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| INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99) | Application Number | | 10552795 |
| | Filing Date | | 2006-07-13 |
| | First Named Inventor | HOWLID, Martin | |
| | Art Unit | 3663 | |
| | Examiner Name | HELLNER, Mark | |
| | Attorney Docket Number | 14.0228-PCT-US (WG0075) | |

| U.S.PATENTS | | | | | | |
|-------------------|---------|---------------|------------------------|------------|---|--|
| Examiner Initial* | Cite No | Patent Number | Kind Code ¹ | Issue Date | Name of Patentee or Applicant of cited Document | Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear |
| | 1 | 4845686 | | 1989-07-04 | Brac | |
| | 2 | 6606958 | B1 | 2003-08-19 | Bouyoucos | |
| | 3 | 7446706 | B2 | 2008-11-04 | Riley, et al. | |
| | 4 | 7047898 | B2 | 2006-05-23 | Petersen, et al. | |
| | 5 | 6932017 | B1 | 2005-08-23 | Hillesund, et al. | |
| | 6 | 6873571 | B2 | 2005-03-29 | Clayton, et al. | |
| | 7 | 6691038 | B2 | 2004-02-10 | Zajac | |
| | 8 | 6671223 | B2 | 2003-12-30 | Bittleston | |

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| | | | | | |
|----|---------|----|------------|--------------------|--|
| 9 | 6618321 | B2 | 2003-09-09 | Brunet | |
| 10 | 6590831 | B1 | 2003-07-08 | Bennett, et al. | |
| 11 | 6525992 | B1 | 2003-02-25 | Olivier, et al. | |
| 12 | 6510390 | B1 | 2003-01-21 | Bunting, et al. | |
| 13 | 6459653 | B1 | 2002-10-01 | Kuche | |
| 14 | 6292436 | B1 | 2001-09-18 | Rau, et al. | |
| 15 | 6256589 | B1 | 2001-07-03 | Gallotti Guimaraes | |
| 16 | 6088298 | | 2000-07-11 | Onat | |
| 17 | 6031789 | | 2000-02-29 | Broussard, et al. | |
| 18 | 6028817 | | 2000-02-22 | Ambs | |
| 19 | 6011752 | | 2000-01-04 | Ambs, et al. | |

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| | | | |
|----|---------|------------|-------------------|
| 20 | 6005828 | 1999-12-21 | Carroll, et al. |
| 21 | 5995452 | 1999-11-30 | Bouyoucus |
| 22 | 5924049 | 1999-07-13 | Beasley, et al. |
| 23 | 5920828 | 1999-07-06 | Norris, et al. |
| 24 | 5790472 | 1998-08-04 | Workman, et al. |
| 25 | 5784335 | 1998-07-21 | Deplante, et al. |
| 26 | 5771202 | 1998-06-23 | Bale, et al. |
| 27 | 5619474 | 1997-04-08 | Kuche |
| 28 | 5523951 | 1996-06-04 | Kriesgman, et al. |
| 29 | 5448233 | 1995-09-05 | Saban, et al. |
| 30 | 5353223 | 1994-10-04 | Norton, et al. |

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| | | | |
|----|---------|------------|------------------|
| 31 | 5281773 | 1994-01-25 | Duren |
| 32 | 5184329 | 1993-02-02 | Regnault, et al. |
| 33 | 5142498 | 1992-08-25 | Duren |
| 34 | 5113377 | 1992-05-12 | Johnson |
| 35 | 5052814 | 1991-10-01 | Stubblefield |
| 36 | 4974212 | 1990-11-27 | Sheiman |
| 37 | 4960183 | 1990-10-02 | Young, II |
| 38 | 4868793 | 1989-09-19 | Dunbar |
| 39 | 4862422 | 1989-08-29 | Brac |
| 40 | 4727956 | 1988-03-01 | Huizer |
| 41 | 4693336 | 1987-09-15 | Newman |

Receipt date: 09/15/2010

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| | | | |
|----|---------|------------|---------------------|
| 42 | 4506352 | 1985-03-19 | Brandsaeter, et al. |
| 43 | 4110726 | 1978-08-29 | Dorrance, et al. |
| 44 | 4063213 | 1977-12-13 | Itria, et al. |
| 45 | 4033278 | 1977-07-05 | Waters |
| 46 | 4027616 | 1977-06-07 | Guenther, et al. |
| 47 | 3953826 | 1976-04-27 | Brundrit, et al. |
| 48 | 3921124 | 1975-11-18 | Payton |
| 49 | 3479638 | 1969-11-18 | Rusnak |
| 50 | 3412704 | 1968-11-26 | Buller, et al. |

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U.S.PATENT APPLICATION PUBLICATIONS

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|-------------------|---------|--------------------|------------------------|------------------|---|--|
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| | | | | | |
|----|-------------|----|------------|--------------------|--|
| 1 | 20090141587 | A1 | 2009-06-04 | Welker, et al. | |
| 2 | 20080279042 | A1 | 2008-11-13 | Storteig, et al. | |
| 3 | 20050219948 | A1 | 2005-10-06 | Naess | |
| 4 | 20040196737 | A1 | 2004-10-07 | Nicholson | |
| 5 | 20040136266 | A1 | 2004-07-15 | Howlid, et al. | |
| 6 | 20040060498 | A1 | 2004-04-01 | Petersen | |
| 7 | 20030220745 | A1 | 2003-11-27 | Campbell | |
| 8 | 20030168277 | A1 | 2003-09-11 | Hopperstad, et al. | |
| 9 | 20030151974 | A1 | 2003-08-14 | Kutty, et al. | |
| 10 | 20030039170 | A1 | 2003-02-27 | Soreau, et al. | |

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FOREIGN PATENT DOCUMENTS

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| Examiner Initial* | Cite No | Foreign Document Number ³ | Country Code ^{2,1} | Kind Code ⁴ | Publication Date | Name of Patentee or Applicant of cited Document | Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear | T ⁵ |
|-------------------|---------|--------------------------------------|-----------------------------|------------------------|------------------|---|--|--------------------------|
| | 1 | 2005 096018 | WO | A1 | 2005-10-13 | WesternGeco Seismic Holdings | | <input type="checkbox"/> |
| | 2 | 2005 096015 | WO | A1 | 2005-10-13 | STATOIL ASA | | <input type="checkbox"/> |
| | 3 | 2 412 965 | GB | A | 2005-10-12 | STATOIL ASA | | <input type="checkbox"/> |
| | 4 | 2 364 388 | GB | A | 2002-01-23 | GECO AS | | <input type="checkbox"/> |
| | 5 | 2001 055747 | WO | A1 | 2001-08-02 | GECO AS | | <input type="checkbox"/> |
| | 6 | 0 613 025 | EP | A1 | 1994-08-31 | GECO AS | | <input type="checkbox"/> |
| | 7 | 0 525 391 | EP | A1 | 1993-02-03 | PRAKLA SEISMOS GMBH | | <input type="checkbox"/> |
| | 8 | 0 321 705 | EP | A2 | 1989-06-28 | PRAKLA SEISMOS GMBH | | <input type="checkbox"/> |
| | 9 | 0 319 716 | EP | A2 | 1989-06-14 | PRAKLA SEISMOS AG | | <input type="checkbox"/> |
| | 10 | 0 018 053 | EP | A1 | 1980-10-29 | SHELL RESEARCH | | <input type="checkbox"/> |

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|--------------------|---------|---|--------------------------|
| | 1 | RCE Amendment (2010 August 7), Final Office Action (2010 February 19), Response to Office Action (2009 December 1), and Office Action (2009 September 2); US Serial No. 10/598,732 (US 2009-0141587 A1 - Welker, et al). | <input type="checkbox"/> |
| | 2 | Response to Office Action (2010 July 14) and Office Action (2010 April 15); US Serial No. 12/175,939 (US 2008-0279042 A1 - Storteig, et al). | <input type="checkbox"/> |
| | 3 | UK Search Report for GB 0511248.7; 2005 September 8. | <input type="checkbox"/> |
| | 4 | Schmidt; "Solution for Seismic Source Registration"; WorldOil.com; 226(9), 1-3; 2005 September. | <input type="checkbox"/> |
| | 5 | Gikas, et al.; "Reliability Analysis in Dynamic Systems: Implications for Positioning Marine Seismic Networks"; Geophysics; Vol. 64, No. 4, pp. 1014-1022; 1999 Jul/Aug. | <input type="checkbox"/> |
| | 6 | Armstrong et al.; "The Best Parameter Subset Using the Chebyshev Curve Fitting Criterion"; Mathematical Programming; Vol. 27, No. 1, pp. 64-74; 1983. | <input type="checkbox"/> |

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